

In the Specification

Please amend the specification of this application as follows:

Rewrite the paragraph at page 8, lines 1 to 2 as follows:

*B1*  
--Fig. **12** is a block diagram of a D S execution unit group of the DSP core of Fig. **2**;--

Rewrite the paragraph at page 21, line 24 to page 22, line 17 as follows:

*B2*  
--Fig **12** is a top level block diagram of S unit group **82**, which is optimized to handle shifting, rotating, and Boolean operations, although hardware is available for a limited set of add and subtract operations. S unit group **82** is unique in that most of the hardware can be directly controlled by the programmer. S unit group **82** has two more read ports than the A and C unit groups, thus permitting instructions to operate on up to four source registers, selected through input muxes **144**, **146**, **161**, and **163**. Similar to the A and C unit groups, the primary execution functionality is performed in the Execute cycle of the design. S unit group **82** has two major functional units: 32-bit S adder unit **156**, and S rotate/Boolean unit **165**. S rotate/Boolean unit **165** includes S rotator unit **158**, S mask generator unit **160**, S bit replicate unit **167**, S ~~unpack/-sign~~ unpack/sign extend unit **169**, and S logical unit **162**. The outputs from S rotator unit **158**, S mask generator unit **160**, S bit replicate unit **167**, and S ~~unpack/-sign~~ unpack/sign extend unit **169** are forwarded to S logical unit **162**. The various functional units that make up S rotate/Boolean unit **165** can be utilized in combination to make S unit group **82** capable of handling very complex Boolean operations. Finally, result mux **148** selects an output from one of the two major functional units, S adder unit

**B2** 156 and S rotate/Boolean unit 165, for forwarding to register file

76.--

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